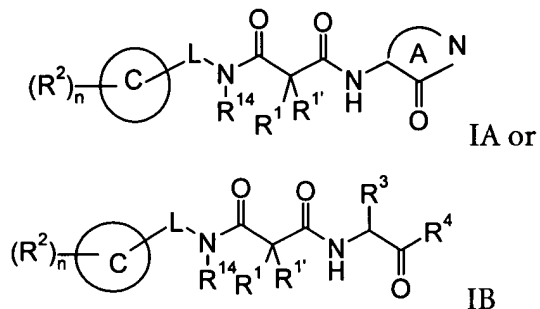


Claims

1. A compound of formula



wherein

L is a bond, $-(CH_2)_m-$, $-CH(CH_3)-$, or is ;

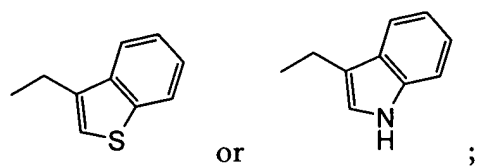
is a cyclic ring, selected from the group consisting of phenyl, pyridinyl, furanyl, benzo[b]thiophenyl, tetrahydronaphthyl, indanyl, 2,2-dimethyl-[1,3]dioxolanyl and tetrahydrofuranlyl;

R^1 and $R^{1'}$ are the same or different and are hydrogen, lower alkyl, halogen, benzyl or lower alkenyl;

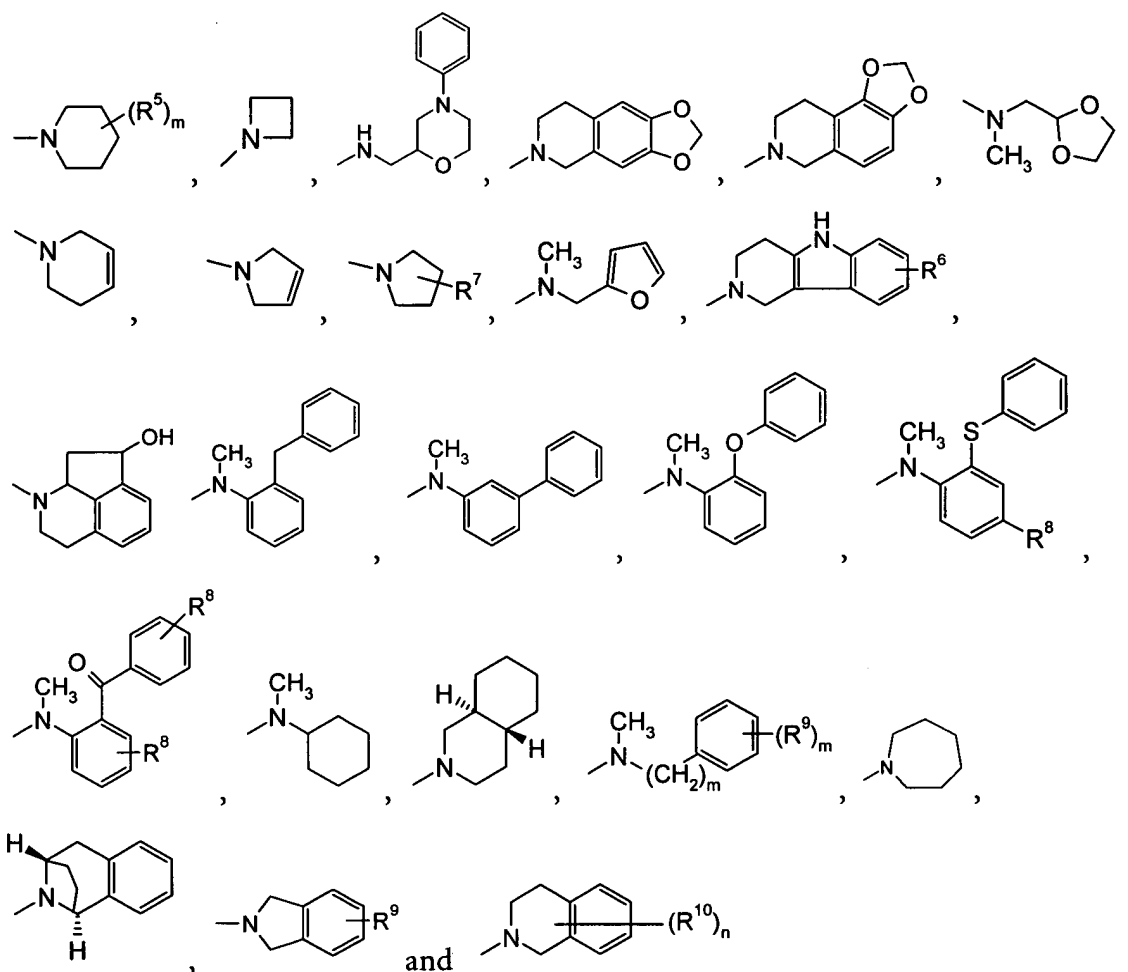
each R^2 is independently selected from the group consisting of hydrogen, hydroxy, halogen, lower alkyl, lower alkoxy and trifluoromethyl;

R^3

- is phenyl or benzyl, each of which is unsubstituted or substituted by one or two substituents selected from the group consisting of halogen and cyano, or is
- lower alkyl,
- two hydrogen atoms,
- $(CH_2)_m$ -S-lower alkyl,
- $(CH_2)_m$ -cycloalkyl,
- $(CH_2)_m$ -OH,
- CH_2OCH_2 -phenyl,



R^4 is lower alkoxy,
 - mono- or dialkyl amino,
 - $N(CH_3)(CH_2)_m-C\equiv CH$,
 or is a mono-, di or tricyclic group, unsubstituted or substituted by R^5 to R^{10} , and
 which groups can be linked by $-N(CH_3)(CH_2)_o$, to the $-C(O)-$ group in
 formula IB, selected from the group consisting of



wherein

each R^5 is independently selected from the group consisting of hydrogen, halogen,
 lower alkyl and $-(CH_2)_mOH$;

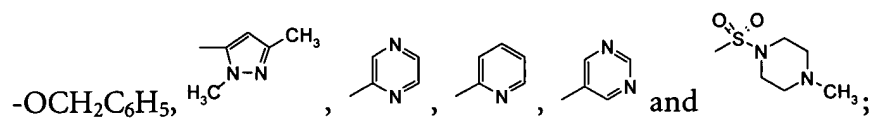
R^6 is hydrogen, halogen or lower alkoxy;

R^7 is hydrogen or $-\text{CH}_2\text{OCH}_3$;

R^8 is hydrogen or halogen;

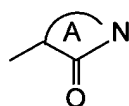
R^9 is hydrogen, lower alkoxy, lower alkyl or amino;

each R^{10} is independently selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, lower cycloalkyl, halogen, hydroxy, $=\text{O}$, amino, nitro, $-\text{CH}_2\text{CN}$,

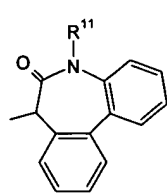


m is 1 or 2;

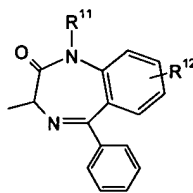
n is 1, 2 or 3;



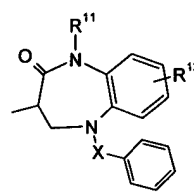
is selected from the group consisting of



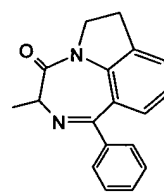
a),



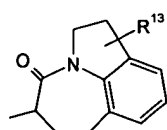
b),



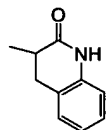
c)



d)



e) and



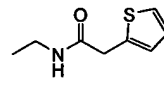
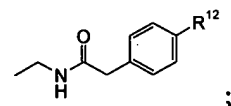
f);

wherein

X is $-\text{CH}_2$, $-\text{S}(\text{O})_2$ or $-\text{C}(\text{O})-$;

R^{11} is hydrogen or lower alkyl;

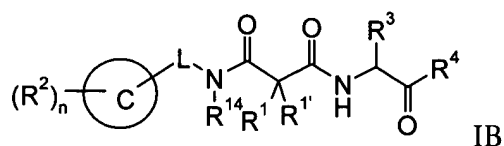
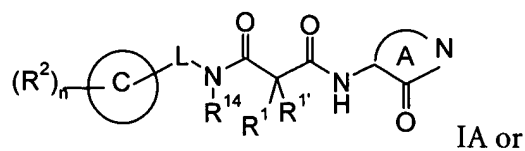
R^{12} is hydrogen or halogen;

R^{13} is hydrogen, CN, hydroxy, $-\text{C}(\text{O})\text{NH}_2$,  or  ;

R^{14} is hydrogen, lower alkyl, $-(\text{CH}_2)_2\text{OH}$ or $-(\text{CH}_2)_2\text{CN}$;

or a pharmaceutically acceptable acid addition salt thereof.

2. A compound of formula



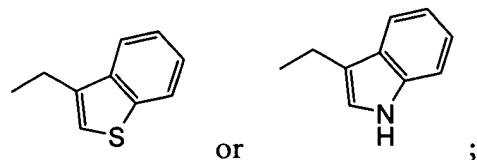
wherein

R^1 and $R^{1'}$ are the same or different and are hydrogen, lower alkyl, halogen, benzyl or lower alkenyl;

each R^2 is independently selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy and trifluoromethyl;

R^3 is phenyl or benzyl, each of which is unsubstituted or substituted by one or two substituents selected from the group consisting of halogen and cyano, or is

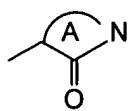
- lower alkyl,
- two hydrogen atoms,
- $(CH_2)_m$ -S-lower alkyl,
- $(CH_2)_m$ -cycloalkyl,
- $(CH_2)_m$ -OH,
- CH_2OCH_2 -phenyl,



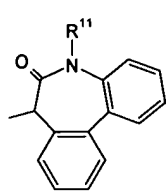
R^4 is lower alkoxy,

- mono- or dialkyl amino,
- $N(CH_3)(CH_2)_m-C\equiv CH$,

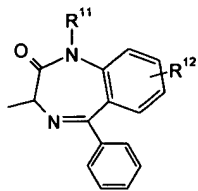
or is a mono-, di or tricyclic group, unsubstituted or substituted by R^5 to R^{10} , and which groups can be linked by $-N(CH_3)(CH_2)_o$, to the $-C(O)-$ group in formula IB, selected from the group consisting of



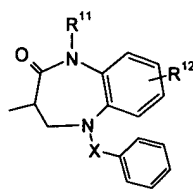
is selected from the group consisting of



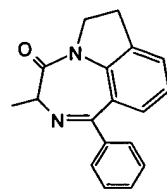
a),



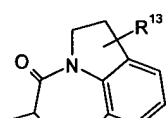
b),



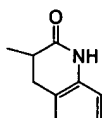
c)



d)



e) and



f);

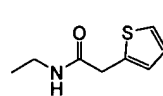
wherein

X is $-\text{CH}_2$, $-\text{S}(\text{O})_2$ or $-\text{C}(\text{O})-$;

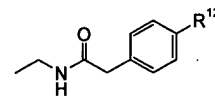
R^{11} is hydrogen or lower alkyl;

R^{12} is hydrogen or halogen;

R^{13} is hydrogen, CN, hydroxy, $-\text{C}(\text{O})\text{NH}_2$,



or

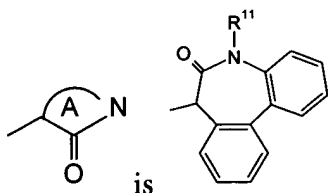


;

or a pharmaceutically acceptable acid addition salt thereof.

3. A compound of formula IA in accordance with claim 1.

4. A compound of formula IA in accordance with claim 3, wherein



is

5. A compound of formula IA in accordance with claim 4 wherein C is phenyl.

6. A compound in accordance with claim 5 selected from the group consisting of

N-(3,5-difluoro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-2-fluoro-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-2-isopropyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-2-ethyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-2-fluoro-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-2,2-dimethyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3,5-difluoro-benzyl)-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-2-propyl-malonamide,
 N-benzyl-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(4-fluoro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(4-chloro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(3-fluoro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(2,5-difluoro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 2-methyl-N-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-N'-(2,3,5-trifluoro-benzyl)-malonamide,
 N-(2-fluoro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,
 N-(2-chloro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide and
 N-(3-chloro-benzyl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide.

7. A compound of formula IA in accordance with claim 4, wherein \textcircled{C} is a cyclic ring selected from the group consisting of furanyl, benzo[b]thiophenyl and indanyl.

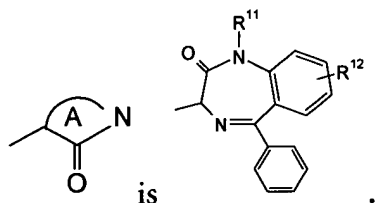
8. A compound in accordance with claim 7, selected from the group consisting of

N-furan-2-ylmethyl-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide,

N-benzo[b]thiophen-3-ylmethyl-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide and

N-(4,6-difluoro-indan-1-yl)-2-methyl-N'-(5-methyl-6-oxo-6,7-dihydro-5H-dibenzo[b,d]azepin-7-yl)-malonamide.

9. A compound of formula IA in accordance with claim 3 wherein



10. A compound in accordance with claim 9, selected from the group consisting of

(N-(3,5-difluoro-benzyl)-2-methyl-N'-(1-methyl-2-oxo-5-phenyl-2,3-dihydro-1H-benzo[e][1,4]diazepin-3-yl)-malonamide,

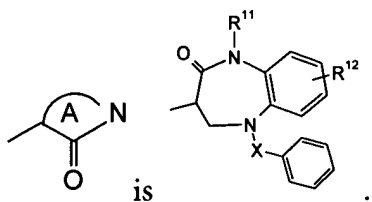
N-(3,5-difluoro-benzyl)-2-fluoro-2-methyl-N'-(1-methyl-2-oxo-5-phenyl-2,3-dihydro-1H-benzo[e][1,4]diazepin-3-yl)-malonamide,

N-(3,5-difluoro-benzyl)-N'-(1-methyl-2-oxo-5-phenyl-2,3-dihydro-1H-benzo[e][1,4]diazepin-3-yl)-2-propyl-malonamide,

N-(3,5-difluoro-benzyl)-2-ethyl-N'-(1-methyl-2-oxo-5-phenyl-2,3-dihydro-1H-benzo[e][1,4]diazepin-3-yl)-malonamide and

N-(4-chloro-benzyl)-2-methyl-N'-(1-methyl-2-oxo-5-phenyl-2,3-dihydro-1H-benzo[e][1,4]diazepin-3-yl)-malonamide.

11. A compound of formula IA in accordance with claim 3, wherein



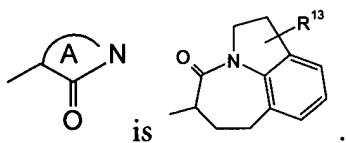
12. A compound in accordance with claim 11, selected from the group consisting of

N-(5-benzyl-1-methyl-2-oxo-2,3,4,5-tetrahydro-1H-benzo[b][1,4]diazepin-3-yl)-N'-(3,5-difluoro-benzyl)-2-methyl-malonamide,

N-(5-benzenesulfonyl-1-methyl-2-oxo-2,3,4,5-tetrahydro-1H-benzo[b][1,4]diazepin-3-yl)-N'-(3,5-difluoro-benzyl)-2-methyl-malonamide and

N-(5-benzoyl-1-methyl-2-oxo-2,3,4,5-tetrahydro-1H-benzo[b][1,4]diazepin-3-yl)-N'-(3,5-difluoro-benzyl)-2-methyl-malonamide.

13. A compound of formula IA in accordance with claim 3, wherein



14. A compound in accordance with claim 13, selected from the group consisting of

(2S-cis)-N-(3,5-difluoro-benzyl)-2-methyl-N'-{4-oxo-2-[(2-thiophen-2-yl-acetylamino)-(2R,S)-methyl]-1,2,4,5,6,7-hexahydro-azepino[3,2,1-hi]indol-5-yl}-malonamide and (2S-cis)-N-(3,5-difluoro-benzyl)-N'-(2-{[2-(4-fluoro-phenyl)-acetylamino]-methyl}-4-oxo-1,2,4,5,6,7-hexahydro-azepino[3,2,1-hi]indol-5-yl)-2,2-dimethyl-malonamide.

15. A compound of formula IB in accordance with claim 1.

16. A compound of formula IB in accordance with claim 2.

17. A compound in accordance with claim 1, wherein at least one R² is fluoro.

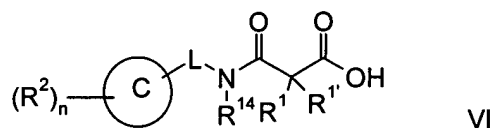
18. A composition comprising a compound of claim 1 and a pharmaceutically acceptable carrier.

19. A composition comprising a compound of claim 2 and a pharmaceutically acceptable carrier.

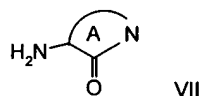
20. A method of treating Alzheimer's disease comprising administering to an individual an effective amount of a compound of claim 1.

21. A method of treating Alzheimer's disease comprising administering to an individual an effective amount of a compound of claim 2.

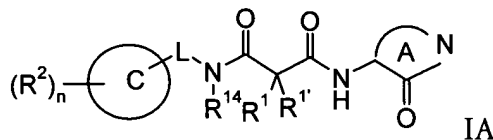
22. A process for preparing a compound of formula IA as defined in claim 1 which process comprises reacting a compound of formula



with a compound of formula

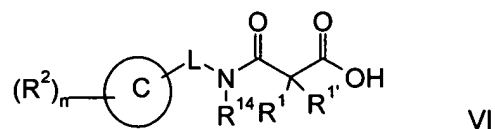


to produce a compound of formula

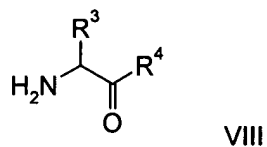


wherein the substituents are defined in claim 1.

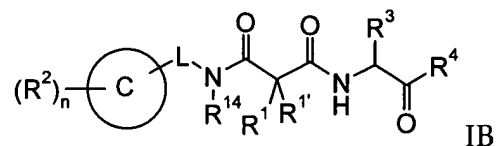
23. A process for preparing a compound of formula IB as defined in claim 1 which process comprises reacting a compound of formula



with a compound of formula

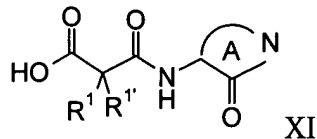


to produce a compound of formula

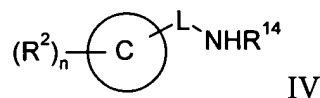


wherein the substituents are defined in claim 1.

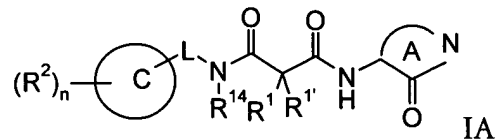
24. A process for preparing a compound of formula IA as defined in claim 1 which process comprises reacting a compound of formula



with a compound of formula



to produce a compound of formula



wherein the substituents are defined in claim 1.